

## LAB 6

### Quiz

Note: You should take Quiz 2 at the start of your lab period.

### Objectives

1. Define an initial architecture for your project.
2. Create architectural diagrams to represent your system from at least two perspectives – an overview of the entire system, and one more particular perspective.

Designers and developers need to have a common understanding of the system that they are building. Architectural design provides that understanding at a high level. This is commonly done with an Overview diagram, and various architectural perspectives. The architectural design gives everyone the “big picture” view of the system. This lab will help you create and document an initial architecture for your system.

### Procedure

#### Step 1 – Create a System Overview Diagram

An Overview Diagram helps people understand the following:

**System boundary** – The boundary tells where the system begins (or ends). Things inside the boundary are part of the system; things outside the boundary are not part of the system; anything that crosses the boundary is an interface.

**System components** – Try to identify the major parts of your system from a technical perspective. Typical major components are:

- Screens or Web pages that your system displays
- Databases that you design and whose data is part of your system
- Files (e.g., data that is part of the system but not stored in a database)
- Code that you write or incorporate into your system

1.A - Use Figure 6-1 to start to define your system.

- Fill in the system name
- Identify things that cross the system boundary: does your system interact with people? This is a user interface. Does your system interact with another system? This is a data interface. Does your system exchange messages with another system? This is a programming interface. Draw these in using arrows to represent things coming into or out of your system. Label each arrow.

1.B - Use Figure 6-2 to identify some of the components that exist within your system boundary

- If you identified a user interface above, create a component to represent the code and screens of the user interface.
- If there is data flowing into or out of your application, list a file or database where your system will store the data (if it gets stored and not used immediately)
- List one or more component to represent the software in your system. If you can name major functional parts of the software, that would be a reasonable starting point. If not, show one block to represent the code.

1.C - Use Figure 6-3 to combine the information in 6-1 and 6-2 into a single system overview diagram

### **Step 2 – Create a Screen Hierarchy Diagram**

A screen hierarchy diagram provides a single picture showing all the screens in the system and the basic navigation paths connecting the screens. Typically, the “home” or “landing” screen that is displayed when the system starts is shown at the top (or on the left). Pages that can be reached from that page are shown below the home page, and so on. Note that not all possible navigation paths need be shown. For example, if every screen has a Help button, all those links are often not shown in this diagram.

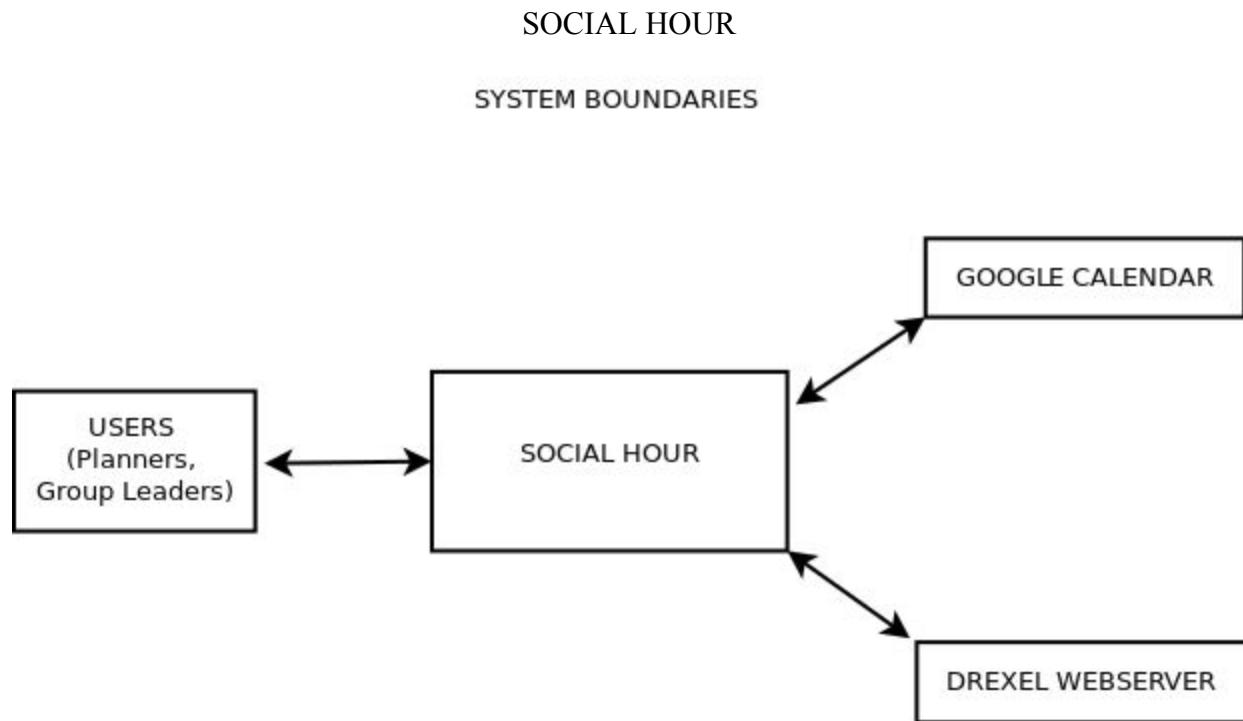
Be sure to provide a caption for each of your diagrams.

### **What to Turn In**

In order to obtain full credit for this lab, ***each team*** must turn in:

1. Figure 6-1 - System Boundary
2. Figure 6-2 - List of major system components
3. Figure 6-3 - System Overview Diagram
4. Figure 6-4 - Screen hierarchy diagram for your system
5. Project Gantt Chart - Update and upload

**Figure 6-1 – System Boundary**



**Figure 6-2 – Possible system components**

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Database - Events, Users, Friend Groups (Right now: MongoDB)

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Code for Android Application

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Code for Drexel Server (MongoDB)

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Android Application - Includes interface for both users and group leaders

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User Manager

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Access manager -User Authentication Module (Hooks onto Google Calendar)

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Data manager - Database access layer (RoboMongo)

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Figure 6-3 – System Overview Diagram

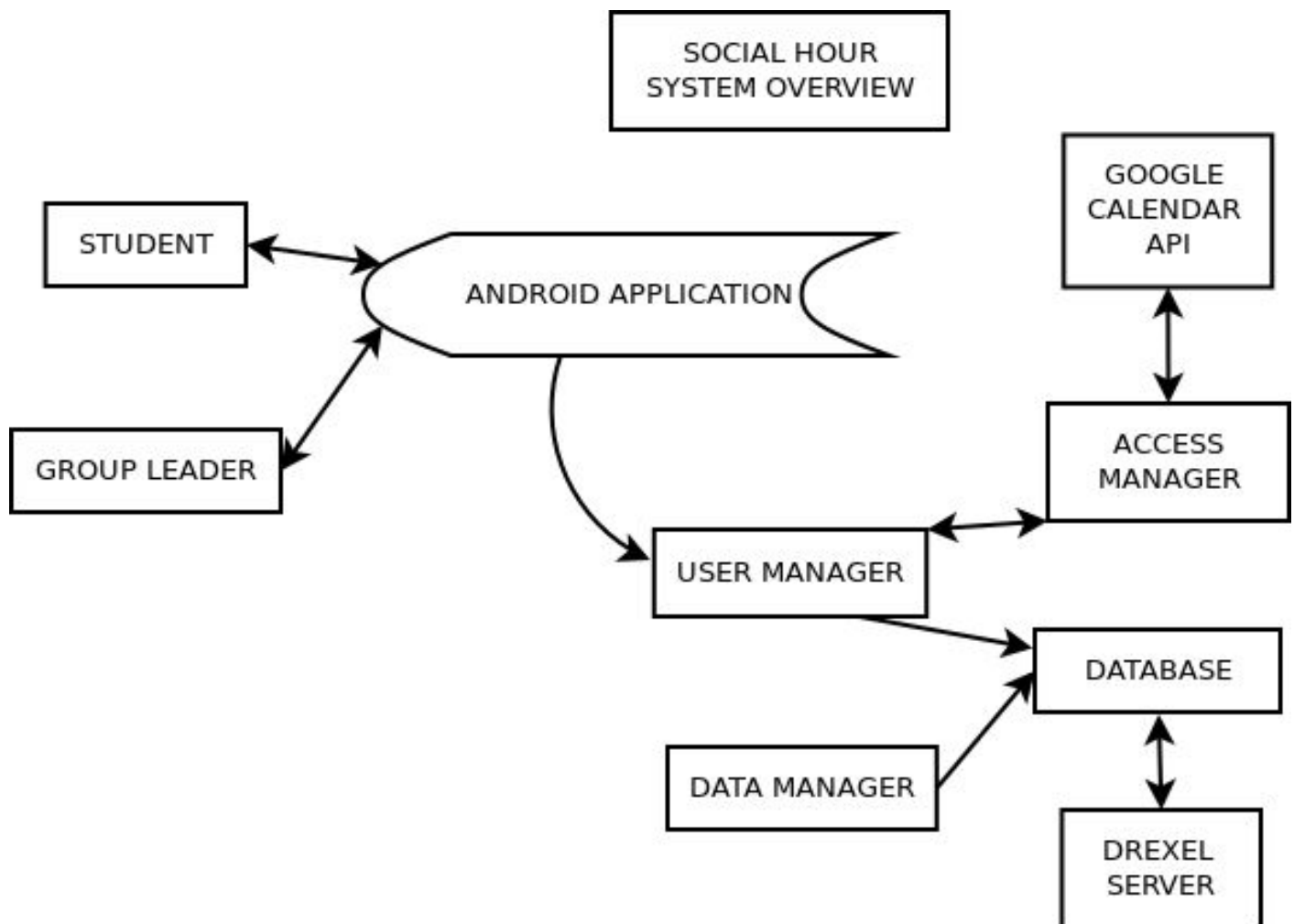


Figure 6-4 – Screen Hierarchy Diagram

